

**STATE OF CALIFORNIA**  
**California Energy Commission**

Minutes of the May 9, 2012, Energy Commission Business Meeting

The Meeting was called to order at 10:09 a.m. by Chair Robert B. Weisenmiller. The Pledge of Allegiance was led by Chair Weisenmiller.

Present: Robert B. Weisenmiller, Chair  
Karen Douglas, Commissioner

Carla J. Peterman, Commissioner  
Andrew McAllister, Commissioner

1. **CONSENT CALENDAR.** (Items on the Consent Calendar will be taken up and voted on as a group. A commissioner may request that an item be moved and discussed later in the meeting.)
  - a. **STANFIELD SYSTEMS INCORPORATED.** Possible approval of Amendment 1 to Purchase Order 10-409.00-004 with Stanfield Systems, Incorporated to add \$29,900 for additional technical support for the Dynamic Simulation Transportation Energy Model (DynaSim). The revised contract total will be \$329,048. (ERPA funding.) Contact: Laura Lawson.
  - b. **MATHWORKS.** Possible approval of Purchase Order 11-409.00-018 for \$25,500 for Mathworks' MatLab training for 12 Energy Commission staff. Training will enable staff to manage, modify, and fully utilize the recently developed transportation energy demand forecasting modeling system, DynaSim, which utilizes several MatLab executables as the primary computational core. (ERPA funding.) Contact: Vanessa Kritlow.
  - c. **NATIONAL RENEWABLE ENERGY LABORATORY.** Possible approval of Amendment 1 to Contract 500-08-058 with the U.S. Department of Energy, National Renewable Energy Laboratory for a nine-month no-cost time extension to March 30, 2013 to allow time to schedule a technology forum and assess new findings in the area of natural gas vehicles and infrastructure and meet all deliverables, including the final report. (PIER natural gas funding.) Contact: Reynaldo Gonzalez.
  - d. **STANFORD UNIVERSITY.** Possible approval of Amendment 1 to Agreement PIR-10-054 with Stanford University for a no-cost extension of the term of the agreement by one year to October 30, 2013. (PIER electricity funding.) Contact: David Weightman.
  - e. **CLEAN ENERGY STATES ALLIANCE.** Possible approval of Contract 400-11-003 for \$60,000 to renew the Energy Commission membership in the Clean Energy States Alliance (CESA). CESA is a unique multistate collaboration of public clean energy funds and state agencies working together to develop and promote clean energy and low-carbon technologies and expand the market for these technologies. (RRTF funding.) Contact: Sarah Taheri.

- f. MEMORANDUM OF UNDERSTANDING WITH THE ENERGY COMMISSION, MALAYSIA. Possible approval of a Memorandum of Understanding between the Energy Commission, Malaysia and the California Energy Commission to promote a partnership and cooperation in the areas of energy efficiency, demand-side management, renewable energy development, integrated resource planning, electricity regulation, and transmission pricing. Contact: Reneé Webster-Hawkins.

*Commissioner Douglas moved and Commissioner Peterman seconded approval of the Consent Calendar with the exception of Item 1d. The vote was unanimous. (4-0)*

*Commissioner Douglas recused herself from consideration of Item 1d and left the room. Commissioner Peterman moved and Commissioner McAllister seconded approval of Item 1d. The vote was unanimous. (3-0)*

2. ENERGY COMMISSION COMMITTEE APPOINTMENTS. Possible approval of appointments to the Energy Commission's Standing Committees and Siting Case Committees. Contact: Kevin Barker. (5 minutes)

*Commissioner Douglas returned to the dais.*

*A committee consisting of Commissioner Douglas, Presiding Member, and Commissioner McAllister, Associate Member was appointed for Proceeding 12-CAI-01. Commissioner Peterman moved and Commissioner Douglas seconded approval of the appointment. The vote was unanimous. (4-0)*

3. COMPLAINT AND REQUEST FOR INVESTIGATION OF VALLEY DUCT TESTING (Docket No. 12-CAI-02): Possible appointment of an Energy Commission committee to conduct proceedings as set forth in Commission Regulations sections 1230 and following, on the complaint and request for investigation of Valley Duct Testing, filed on behalf of CalCERTS, related to the accuracy of ratings submitted to CalCERTS by Valley Duct Testing Raters under the Energy Commission's California Home Energy Rating System Program. Contact: Caryn Holmes (5 minutes)

*A committee consisting of Commissioner Douglas, Presiding Member, and Commissioner McAllister, Associate Member was appointed for Proceeding 12-CAI-02. Commissioner Douglas moved and Commissioner Peterman seconded approval of the appointment. The vote was unanimous. (4-0)*

4. 2012-2013 INVESTMENT PLAN UPDATE FOR THE ALTERNATIVE AND RENEWABLE FUEL AND VEHICLE TECHNOLOGY PROGRAM. Possible adoption of the 2012-2013 Investment Plan Update for the Alternative and Renewable Fuel and Vehicle Technology Program. The purpose of the program is to develop and deploy innovative technologies that transform California's fuel and vehicle types to help attain the state's climate change goals. The Energy Commission is required to develop and adopt the Investment Plan to determine priorities and opportunities for the program, describe how funding will complement existing public and private investments, and serve as a guide for funding decisions. Contact: Pat Perez. (30 minutes)

*Commissioner McAllister recused himself from discussion of Item 4 and left the room. Commissioner Peterman moved and Commissioner Douglas seconded adoption of the 2012-2014 Investment Plan. The vote was unanimous. (3-0)*

5. 2010-2011 INVESTMENT PLAN FOR THE ALTERNATIVE AND RENEWABLE FUELS AND VEHICLE TECHNOLOGY PROGRAM. Possible approval of a modification to the 2010-2011 Investment Plan for the Alternative and Renewable Fuels and Vehicle Technology Program. Contact: Pat Perez. (10 minutes)

*Commissioner Peterman moved and Commissioner Douglas seconded approval of Item 5. The vote was unanimous. (3-0)*

*Commissioner McAllister returned to the dais.*

*Chief Counsel Michael Levy requested a closed session to discuss facts and circumstances that may warrant the initiation of litigation; and that constitute a significant exposure to litigation against the Commission. The Commissioners adjourned to closed session.*

*At 1:30 p.m. the Commission returned to open session.*

6. RENEWABLES PORTFOLIO STANDARD ELIGIBILITY GUIDEBOOK. Possible adoption of the *Renewables Portfolio Standard Eligibility Guidebook, Fifth Edition*. The *RPS Eligibility Guidebook* explains the requirements and process for certifying eligible renewable energy resources for the California RPS program, and describes how the Energy Commission tracks and verifies compliance with the RPS. Contact: Kate Zocchetti. (30 minutes)

*Commissioner Peterman moved and Commissioner McAllister seconded adoption of the Guidebook, as amended by the errata. The vote was unanimous. (4-0)*

7. OVERALL PROGRAM GUIDEBOOK FOR RENEWABLE ENERGY PROGRAM. Possible adoption of the *Overall Program Guidebook for the Renewable Energy Program, Fourth Edition*. The *Overall Program Guidebook* describes how the Renewable Energy Program is administered, and includes information on requirements that apply to the Renewables Portfolio Standard Program. The *Overall Program Guidebook* provides information on appealing the Energy Commission's decisions regarding RPS certification, as well as a glossary of terms that are used by the RPS and other Renewable Energy Program elements. Contact: Kate Zocchetti. (20 minutes)

*Commissioner Peterman moved and Commissioner Douglas seconded adoption of the Guidebook. The vote was unanimous. (4-0)*

8. JAMES A. BAKER III INSTITUTE FOR PUBLIC POLICY ENERGY FORUM. Possible approval of Contract 800-11-001 for \$150,000 with the James A. Baker III Institute for access to advanced research in the natural gas market area, including data, assumptions, inputs, and outputs for natural gas base case scenarios through 2015. (ERPA funding.) Contact: Ruben Tavares. (5 minutes)

*Commissioner Peterman moved and Commissioner Douglas seconded approval of Item 8. The vote was unanimous. (4-0)*

9. ARCHITECTURAL ENERGY CORPORATION. Possible approval of Amendment 1 to Contract 400-10-015 with Architectural Energy Corporation to add \$250,000 for continuing technical support services to implement the 2013 Nonresidential Building Energy Efficiency Performance Standards, modify the terms and conditions, and extend the rates through the end of the contract term. (ERPA funding.) Contact: Martha Brook. (5 minutes)
10. BRUCE A. WILCOX, P.E. Possible approval of Amendment 1 to Contract 400-10-016 with Bruce A. Wilcox, P.E. to add \$250,000 for continuing technical support services to implement the 2013 Residential Building Energy Efficiency Performance Standards, modify the terms and conditions, and extend the rates through the end of the contract term. (ERPA funding.) Contact: Martha Brook. (5 minutes)

*Commissioner Douglas moved and Commissioner McAllister seconded approval of Items 9 and 10. The vote was unanimous. (4-0)*

11. PACIFIC GAS AND ELECTRIC COMPANY. Possible approval of Amendment 1 to Contract 500-09-027 with Pacific Gas and Electric Company to add \$500,000 and extend the term 18 months to June 30, 2014. This amendment will modify the scope of work, add a second sodium-sulfur battery energy storage system demonstration, and add a task to compare the performance of two large-scale battery systems in California to help mitigate the variability of renewable generation on the electric grid. (PIER electricity funding.) Contact: Consuelo Sichon. (5 minutes)

*Commissioner Douglas moved and Commissioner Peterman seconded approval of Item 11. The vote was unanimous. (4-0)*

12. U. C. BERKELEY- CENTER FOR THE BUILT ENVIRONMENT. Possible approval of Amendment 1 to Contract 500-08-044 with the Regents of the University of California on behalf of the U. C. Berkeley- Center for the Built Environment to add \$600,000 and extend the term 21 months to March 13, 2015. This amendment will demonstrate efficient personal comfort systems and develop operational strategies for space-conditioning in near-zero energy commercial buildings. (PIER electricity and natural gas funding.) Contact: Chris Scruton. (5 minutes)

*Commissioner Douglas moved and Commissioner Peterman seconded approval of Item 12. The vote was unanimous. (4-0)*

13. LAWRENCE BERKELEY NATIONAL LABORATORY. Possible approval of Amendment 1 to Contract 500-10-052 with the U.S. Department of Energy, Lawrence Berkeley National Laboratory to add \$1.55 million and fund six projects. The projects include enhancing energy simulation and benchmarking software, and conducting research on hot water distribution systems, thermostats, airflow instrumentation, and cool roofs. (PIER electricity and natural gas funding.) Contact: Heather Bird. (5 minutes)

*Commissioner Douglas moved and Commissioner McAllister seconded approval of Item 13. The vote was unanimous. (4-0)*

14. ALTEX TECHNOLOGIES CORPORATION. Possible approval of Agreement PIR-11-021 with Altex Technologies Corporation for a grant of \$1,390,941 to Altex Technologies Corporation to demonstrate the Biomass Blending and Densification System (BBADS) process that will reduce the energy and cost for densifying biomass for fuel and animal feed. This project includes \$481,391 in match funding. (PIER electricity funding.) Contact: Michael Lozano. (5 minutes)

*Commissioner Douglas moved and Commissioner Peterman seconded approval of Item 14. The vote was unanimous. (4-0)*

15. PALO ALTO RESEARCH CENTER INCORPORATED. Possible approval of Agreement PIR-11-006 for a grant of \$1,001,899 to Palo Alto Research Center, Incorporated to demonstrate its hydrodynamic separation (HDS) technology. HDS technology removes suspended solids during the wastewater treatment process, effectively reducing the energy needed for aeration and increasing biogas production. The project includes \$380,817 in match funding. (PIER electricity and natural gas funding.) Contact: Anish Gautam. (5 minutes)

*Commissioner Peterman moved and Commissioner Douglas seconded approval of Item 15. The vote was unanimous. (4-0)*

16. KENNEDY/JENKS CONSULTANTS, INC. Possible approval of Agreement PIR-11-018 for a grant of \$1,418,800 to Kennedy/Jenks Consultants, Inc. to demonstrate an intermediary treatment step to reduce energy use and increase biomethane production at wastewater treatment plants. The project includes \$568,800 in match funding. (PIER electricity funding.) Contact: Jeffrey Doll. (5 minutes)

*Commissioner Douglas moved and Commissioner Peterman seconded approval of Item 16. The vote was unanimous. (4-0)*

17. UTS BIOENERGY LLC. Possible approval of Agreement PIR-11-026 for a grant of \$1,933,551 to UTS Bioenergy LLC to demonstrate a retrofit technology to increase biogas production and reduce organic solids disposal from wastewater treatment plants. This technology will allow wastewater treatment plants to increase biogas production for on-site electricity generation. The project includes \$607,722 in match funding (PIER natural gas funding.) Contact: Rajesh Kapoor. (5 minutes)

*Commissioner Peterman moved and Commissioner McAllister seconded approval of Item 17. The vote was unanimous. (4-0)*

18. AUTOGRID SYSTEMS. Possible approval of Agreement PIR-11-007 for a grant of \$1,199,544 to AutoGrid Systems to demonstrate the use of its Demand Response Optimization and Management System (DROMS) platform at two industrial facilities. The project will allow industrial customers to participate in traditional demand response (DR) programs targeted at reducing peak demand and emerging DR programs designed to provide fast responding ancillary services to the grid to support large-scale integration of renewable generation. The project includes \$603,100 in match funding. (PIER electricity funding.) Contact: Anish Gautam. (5 minutes)



*Commissioner Douglas moved and Commissioner McAllister seconded approval of Item 18. The vote was unanimous. (4-0)*

19. GREAT CIRCLE INDUSTRIES, INC. Possible approval of Agreement PIR-11-011 for a grant of \$750,000 to Great Circle Industries, Inc., to test and demonstrate, and obtain State of California Title 22 regulatory approval for a unique modular wastewater treatment process that conserves energy and water, and reuses water, and where beneficial, plant nutrients. Obtaining regulatory approval is needed in order to use the resulting “cleaned” wastewater for direct irrigation. The project includes \$250,000 in match funding. (PIER electricity funding.) Contact: Heather Bird. (5 minutes)

*Commissioner Douglas moved and Commissioner McAllister seconded approval of Item 19. The vote was unanimous. (4-0)*

20. BLACK & VEATCH. Possible approval of Agreement PIR-11-020 for a grant of \$799,860 to Black & Veatch to demonstrate technology for desalinating wastewater and power plant cooling water which recovers water, produces no salty liquid discharge, and reduces energy consumption and operating costs. The project includes \$249,000 in match funding. (PIER electricity funding.) Contact: Paul Roggensack. (5 minutes)

*Commissioner McAllister moved and Commissioner Peterman seconded approval of Item 20. The vote was unanimous. (4-0)*

21. ICF INTERNATIONAL. Possible approval of Agreement PIR-11-014 for a grant of \$974,179 to ICF International to demonstrate the use of a hybrid uninterruptable power supply (UPS) microturbine at a California datacenter. The modified Capstone microturbine will provide power quality during energy fluctuations and a power source in case of grid failure while taking the UPS off the grid. This UPS can be run on natural gas or renewable energy resources. The project includes \$504,189 in match funding. (PIER natural gas funding.) Contact: Paul Roggensack. (5 minutes)

*Commissioner Douglas moved and Commissioner McAllister seconded approval of Item 21. The vote was unanimous. (4-0)*

22. BERKELEY ENERGY SCIENCES CORPORATION. Possible approval of Agreement PIR-11-010 for a grant of \$1.8 million to Berkeley Energy Sciences Corporation to demonstrate a flywheel energy storage device for peak-shaving applications. The project includes \$800,000 in match funding. (PIER electricity funding.) Contact: Kiel Pratt. (5 minutes)

*Commissioner McAllister moved and Commissioner Douglas seconded approval of Item 22. The vote was unanimous. (4-0)*

23. WEST BIOFUELS, LLC. Possible approval of Agreement PIR-11-008 for a grant of \$2 million to West Biofuels, LLC to demonstrate a biomass combined heat and power system to be deployed in the agricultural/food processing sector. The project includes \$1,450,829 in match funding. (PIER natural gas funding.) Contact: Leah Mohney. (5 minutes)

*Commissioner Douglas moved and Commissioner Peterman seconded approval of Item 23. The vote was unanimous. (4-0)*

24. UNIVERSITY OF CALIFORNIA, BERKELEY. Possible approval of Contract 500-11-017 for \$300,000 with the Regents of the University of California on behalf of the Berkeley campus to communicate data and results collected during WESTCARB geologic assessments and validation studies to stakeholders and the public through an interactive website. (Federal WESTCARB funding.) Contact: Kiel Pratt. (5 minutes)

*Commissioner Peterman moved and Commissioner Douglas seconded approval of Item 24. The vote was unanimous. (4-0)*

25. PACIFIC GAS AND ELECTRIC COMPANY. Possible approval of Contract 500-11-018 for \$1,535,725 with Pacific Gas and Electric Company to explore the feasibility of applying modern control systems and other smart grid technologies to dynamically control voltage to improve grid efficiency, reduce electrical demand, improve system reliability and lower energy consumption on the local distribution system. (PIER electricity funding.) Contact: Jamie Patterson. (5 minutes)

*Commissioner McAllister moved and Commissioner Douglas seconded approval of Item 25. The vote was unanimous. (4-0)*

26. CALIFORNIA INSTITUTE FOR ENERGY AND ENVIRONMENT. Possible approval of Contract 500-11-019 for \$1,167,380 with the Regents of the University of California on behalf of the California Institute for Energy and Environment (CIEE) to conduct a field study to assess the capacity of renewable generation and electric vehicles on utility distribution circuits with San Diego Gas and Electric Company, Pacific Gas and Electric Company, and Southern California Edison. (PIER electricity funding.) Contact: Jamie Patterson. (5 minutes)

*Commissioner Peterman recused herself from Items 26 and 27 and left the room.*

*Commissioner McAllister moved and Commissioner Douglas seconded approval of Item 26. The vote was unanimous. (3-0)*

27. CALIFORNIA INSTITUTE FOR ENERGY AND ENVIRONMENT. Possible approval of Contract 500-11-021 for \$1.2 million with the Regents of the University of California on behalf of the California Institute for Energy and Environment (CIEE) to complete and commercialize diagnostic tools to determine the condition of underground electric cables. (PIER electricity funding.) Contact: Jamie Patterson. (5 minutes)

*Commissioner McAllister moved and Commissioner Douglas seconded approval of Item 27. The vote was unanimous. (3-0)*

28. UNIVERSITY OF CALIFORNIA, DAVIS. Possible approval of Contract 500-11-020 for \$2 million with the Regents of the University of California on behalf of the Davis Campus to provide resource, technical, barrier, and economic assessments and research products on the major renewable energy resources to support achievement of California's renewable energy deployment goals. Researchers from the University of California, San

Diego and the California Center for Sustainable Energy will also participate in assessments. (PIER electricity funding.) Contact: Cheryl Closson. (5 minutes)

*Commissioner Peterman returned to the dais. Commissioner McAllister recused himself and left the room*

*Commissioner Peterman moved and Commissioner Douglas seconded approval of Item 28. The vote was unanimous. (3-0)*

29. SACRAMENTO MUNICIPAL UTILITY DISTRICT. Possible approval of Agreement PIR-11-005 for a grant of \$500,000 to Sacramento Municipal Utility District and approval of the first phase of work to demonstrate and deploy renewable energy technologies. The first phase involves bioenergy subprojects, namely co-digestion of fats, oil and grease and liquid food wastes, and anaerobic digestion systems for New Hope and VanWarmerdam dairies. This award will be cost-share for the Recipient's \$5 million American Recovery and Reinvestment Act of 2009 award. (PIER electricity funding.) Contact: Rizaldo Aldas. (5 minutes)

*Commissioner Douglas moved and Commissioner Peterman seconded approval of Item 29. The vote was unanimous. (4-0)*

30. LOS ANGELES DEPARTMENT OF WATER AND POWER. Possible approval of Agreement PIR-11-009 for a grant of \$1 million to Los Angeles Department of Water and Power to establish protocols and standards in the Smart Grid Demonstration Project for the measurement and validation of energy savings and fossil fuel emissions reductions associated with an electric vehicle program by specifying, acquiring, and installing a sufficiently-sized electric vehicle demonstration network. This award will be cost-share for the recipient's American Recovery and Reinvestment Act of 2009 award for its total \$120.6 million project. (PIER electricity funding.) Contact: Avtar Bining. (5 minutes)

*Commissioner McAllister moved and Commissioner Douglas seconded approval of Item 30. The vote was unanimous. (4-0)*

31. MODESTO IRRIGATION DISTRICT. Possible approval of Agreement PIR-11-015 for a grant of \$149,315 to Modesto Irrigation District to upgrade its distribution system for improved communication and control. This award will be cost-share for the recipient's \$1,493,150 American Recovery and Reinvestment Act of 2009 award. The project includes \$2 million in match funding. (PIER electricity funding.) Contact: Steve Ghadiri. (5 minutes)

*Commissioner Peterman moved and Commissioner McAllister seconded approval of Item 31. The vote was unanimous. (4-0)*

32. BURBANK WATER AND POWER. Possible approval of Agreement PIR-11-017 for a grant of \$1 million to Burbank Water and Power to demonstrate integration of smart grid technologies to improve grid reliability, use of existing transmission assets, and to facilitate integration of renewable resources. This award will be cost-share for the recipient's \$20 million American Recovery and Reinvestment Act of 2009 award and



includes \$39 million in match funding. (PIER electricity funding.) Contact: Steve Ghadiri. (5 minutes)

*Commissioner Peterman moved and Commissioner McAllister seconded approval of Item 32. The vote was unanimous. (4-0)*

33. SOUTHERN CALIFORNIA GAS COMPANY. Possible approval of Agreement PIR-11-023 for a grant of \$1,502,699 to Southern California Gas Company to assess, design, and demonstrate the economical operation of combined heat and power in a state-of-the-art greenhouse. The project includes match funding of \$3,901,080. (PIER natural gas funding.) Contact: Pablo Gutierrez. (5 minutes)

*Commissioner Douglas moved and Commissioner Peterman seconded approval of Item 33. The vote was unanimous. (4-0)*

34. ZERE ENERGY AND BIOFUELS, INC. Possible approval of Agreement PIR-11-016 for a grant of \$998,346 to ZERE Energy and Biofuels, Inc., to develop and demonstrate a prototype combined heat and power system employing its air independent internal oxidation process. The project includes match funding of \$437,500. (PIER natural gas funding.) Contact: Mike Kane. (5 minutes)

*Commissioner Douglas moved and Commissioner McAllister seconded approval of Item 34. The vote was unanimous. (4-0)*

35. LAWRENCE BERKELEY NATIONAL LABORATORY. Possible approval of Contract 500-11-024 for \$600,000 with the U.S. Department of Energy, Lawrence Berkeley National Laboratory to evaluate the potential for geologic carbon sequestration in California's Central Valley to adversely affect groundwater quality. This award is part of the match funding for a \$16 million federal WESTCARB award. (PIER natural gas funding.) Contact: Joe O'Hagan. (5 minutes)

*Commissioner Douglas moved and Commissioner Peterman seconded approval of Item 35. The vote was unanimous. (4-0)*

36. SHAWN SMALLWOOD. Possible approval of Agreement PIR-11-022 for a grant of \$716,596 to Shawn Smallwood to evaluate the potential of an innovative turbine design to reduce avian collisions. The project includes \$174,498 in match funding. (PIER electricity funding.) Contact: Joe O'Hagan. (5 minutes)

*Commissioner Douglas moved and Commissioner Peterman seconded approval of Item 36. The vote was unanimous. (4-0)*

37. JOHN MAULBETSCH. Possible approval of Agreement PIR-11-024 for a grant of \$749,577 to John Maulbetsch to conduct research on reducing wind effects on power plant air-cooled condenser performance. The project includes \$97,000 in match funding. (PIER natural gas funding.) Contact: Joe O'Hagan. (5 minutes)

*Commissioner Douglas moved and Commissioner Peterman seconded approval of Item 37. The vote was unanimous. (4-0)*

38. RANDEL WILDLIFE CONSULTING, INC. Possible approval of Agreement PIR-11-012 for a grant of \$606,257 to Randel Wildlife Consulting, Inc. to quantify desert kit fox

movements, home ranges, disease, and mortality in areas affected by utility-scale solar developments. This information will provide a scientific baseline for developing guidelines to evaluate utility-scale solar development impacts on the desert kit fox. The project includes \$27,210 in match funding. (PIER electricity funding.) Contact: Misa Milliron. (5 minutes)

*Commissioner Douglas moved and Commissioner McAllister seconded approval of Item 38. The vote was unanimous. (4-0)*

39. REDLANDS INSTITUTE, UNIVERSITY OF REDLANDS. Possible approval of Agreement PIR-11-013 for a grant of \$563,776 to Redlands Institute, University of Redlands, to improve a decision support technology to evaluate and mitigate impacts to the desert tortoise from solar developments in the Mojave Desert. The project includes \$43,723 in match funding. (PIER electricity funding.) Contact: Misa Milliron. (5 minutes)

*Commissioner Douglas moved and Commissioner Peterman seconded approval of Item 39. The vote was unanimous. (4-0)*

40. OAKBIO, INC. Possible approval of Agreement PIR-11-019 for a grant of \$474,843 to Oakbio, Inc. to field test a novel technology using a microbial system to capture and convert waste carbon dioxide from industrial flue gas sources such as power plants, oil refineries, and cement plants to valuable biochemicals. The project includes \$176,996 in match funding. (PIER electricity funding.) Contact: Guido Franco. (5 minutes)

*Commissioner Peterman moved and Commissioner Douglas seconded approval of Item 40. The vote was unanimous. (4-0)*

41. KIVERDI, INC. Possible approval of Agreement PIR-11-025 for a grant of \$747,126 to Kiverdi, Inc., to field test, refine, and create a commercial scale-ready novel microbial system to capture and convert waste carbon dioxide from power plant flue gas into high value oils. The project includes \$587,027 in match funding. (PIER electricity funding.) Contact: Guido Franco. (5 minutes)

*Commissioner Douglas moved and Commissioner Peterman seconded approval of Item 41. The vote was unanimous. (4-0)*

42. LAWRENCE LIVERMORE NATIONAL LABORATORY. Possible approval of Contract 500-11-022 for \$600,000 with the U.S. Department of Energy, Lawrence Livermore National Laboratory to develop a low cost nitrogen oxide (NO<sub>x</sub>) sensor that can measure very low emission levels and can be seamlessly integrated with NO<sub>x</sub> pollution control systems. (PIER natural gas funding.) Contact: Guido Franco. (5 minutes)

*Commissioner Douglas moved and Commissioner Peterman seconded approval of Item 42. The vote was unanimous. (4-0)*

43. CALIFORNIA INSTITUTE OF TECHNOLOGY. Possible approval of Contract 500-11-023 for \$5 million with California Institute of Technology to fund the Joint

Center for Artificial Photosynthesis (JCAP), a Department of Energy Energy Innovation Hub. The JCAP team will develop revolutionary methods to generate fuels directly from sunlight. This award will be cost-share for the recipient's \$122 million award from the Department of Energy. (ARFVT funding.) Contact: Aleecia Gutierrez. (5 minutes)

*Commissioner Peterman moved and Commissioner Douglas seconded approval of Item 43. The vote was unanimous. (4-0)*

44. RAND CORPORATION. Possible approval of Contract 600-11-004 for \$4,474,558 with the RAND Corporation for the evaluation, measurement, and verification of the Alternative and Renewable Fuel and Vehicle Technology (ARFVT) program and projects. The RAND Corporation was selected from a competitive request for proposals to evaluate the impact, process, market baseline, market effect, and costs of the ARFVT program and projects. (ARFVTP funding.) Contact: Monica Rudman. (5 minutes)

*Commissioner Douglas moved and Commissioner Peterman seconded approval of Item 44. The vote was unanimous. (4-0)*

45. ELECTRICORE, INC. Possible approval of Agreement ARV-11-012 for a grant of \$2,325,954 to Electricore, Inc. to demonstrate a battery electric medium duty truck to match or surpass the performance of conventional diesel and natural gas vehicles. The project includes match funding of \$948,424. (ARFVTP funding.) Contact: John Mathias. (5 minutes)

*Commissioner Peterman moved and Commissioner McAllister seconded approval of Item 45. The vote was unanimous. (4-0)*

46. ELECTRIC POWER RESEARCH INSTITUTE. Possible approval of Agreement ARV-11-013 for a grant of \$964,210 to Electric Power Research Institute to retrofit existing diesel Class 6 or 7 work trucks with a plug-in hybrid electric vehicle powertrain system. The project will demonstrate the operating performance, fuel savings, and emissions reductions of five heavy-duty work trucks in the South Coast Air Basin. (ARFVTP funding.) Contact: Aida Escala. (5 minutes)

*Commissioner Peterman moved and Commissioner Douglas seconded approval of Item 46. The vote was unanimous. (4-0)*

47. LAWRENCE BERKELEY NATIONAL LABORATORY. Possible approval of Contract 500-11-025 for \$1 million with the U. S. Department of Energy Lawrence Berkeley National Laboratory to demonstrate an all-electric non-tactical vehicle fleet at Los Angeles Air Force Base and explore vehicle-to-grid revenue generating capability of such a fleet by participating as fully as possible in California Independent System Operator's ancillary services markets. The Department of Defense is providing \$2.75 million in funding for this project. (ARFVTP funding.) Contact: Kiel Pratt. (5 minutes)

*Commissioner Peterman moved and Commissioner McAllister seconded approval of Item 47. The vote was unanimous. (4-0)*

48. ALTERNATIVE AND RENEWABLE FUEL AND VEHICLE TECHNOLOGY BUY-DOWN INCENTIVE RESERVATIONS. Possible approval of a total of \$1,074,000 in vehicle buy-down incentive reservations (ARFVT funding). Contact: Andre Freeman. (5 minutes)
- a. TEC OF CALIFORNIA, INC. (OEM – Mack Trucks, Inc.) (BDIR-11-39), in the amount of \$884,000 for the buy-down of 34 natural gas vehicles of 26,001 pounds gross vehicle weight and greater (fuel tank capacity less than 190 Liquefied Natural Gas or 90 Diesel Gallon Equivalent).
  - b. VILLA FORD INC. (OEM – Ford Motor Company) (BDIR-11-40), in the amount of \$60,000 for the buy-down of 3 natural gas vehicles of 14,001 to 26,000 pounds gross vehicle weight.
  - c. TOM’S TRUCK CENTER (OEM – Isuzu Commercial Truck of America, Inc.) (BDIR-11-41) in the amount of \$50,000 for the buy-down of 5 propane vehicles of 14,001 to 26,000 pounds gross vehicle weight.
  - d. TOM’S TRUCK CENTER NORTH COUNTY LLC dba CARMENITA TRUCK CENTER (OEM – Ford Motor Company) (BDIR-11-42) in the amount of \$80,000 for the buy-down of 4 natural gas vehicles of 14,001 to 26,000 pounds gross vehicle weight.

*Commissioner Peterman moved and Commissioner Douglas seconded approval of Item 48. The vote was unanimous. (4-0)*

49. NEW LEAF BIOFUEL, LLC. Possible approval of Agreement ARV-11-015 for a grant of \$511,934 to New Leaf Biofuel, LLC to expand the production capacity of an existing biodiesel facility from 1.5 million to 5 million gallons per year using used vegetable oil and brown grease feedstocks. (ARFVTP funding.) Contact: Phil Cazal. (5 minutes)

50. **Minutes:**

- a. Possible approval of the April 11, 2012, Business Meeting Minutes.

*Commissioner Douglas moved and Commissioner Peterman seconded approval of the April 11 Minutes. The vote was 3-0-1. Commissioner McAllister abstained.*

- b. Possible approval of the April 25, 2012, Business Meeting Minutes.

*Commissioner Douglas moved and Commissioner Peterman seconded approval of the April 25 Minutes. The vote was 3-0-1. Commissioner McAllister abstained.*

51. **Lead Commissioner or Presiding Member Reports.**

Chair Weisenmiller reported on the status of the San Onofre Nuclear Generating Station.

52. **Chief Counsel's Report:** None.

53. **Executive Director's Report.** Executive Director Rob Oglesby gave the report.
54. **Public Adviser's Report.** None.
55. **Public Comment:** None

Appearances:

Mr. Emil Abdelshehid, Los Angeles Department of Water & Power (by telephone)  
Mr. Reed Addis, CalStart  
Mr. Manuel Alvarez, Southern California Edison  
Mr. Anthony Andreoni, California Municipal Utilities Association  
Mr. Mel Asagai, Novastar, Electrification Leadership Council  
Ms. Rebecca Breitenkamp, Oberon Fuels  
Mr. Tim Carmichael, California Natural Gas Coalition  
Mr. John Clements, Kings Canyon Unified School District  
Mr. Peter Cooper, Better Place  
Mr. Hal Daly, Caltech  
Mr. John Flores, Valley Duct Testing  
Mr. Andy Foster, Aemetis  
Mr. Steven Frances, Office of Assemblymember Perea  
Mr. Norman Furuta, US Dept of Navy (by telephone)  
Mr. Michael Hagman, Lindmore Irrigation District  
Mr. James Hendry, San Francisco Public Utilities Commission  
Mr. Randy Howard, Los Angeles Department of Water and Power  
Ms. Bonnie Holmes-Gen  
Mr. Robert Hondeville, Modesto Irrigation District (by telephone)  
Mr. Steven Kelly, Independent Energy Producers Association  
Mr. Chris Knutson, AutoGrid Systems Inc. (by telephone)  
Mr. Neal Koehler, Pacific Ethanol Advanced Energy Coalition  
Ms. Jane Luckhardt on behalf of CalCERTS  
Mr. Matt Miyasato, South Coast Air Quality Management District  
Mr. Steve Rapapa, City of Reedley  
Mr. Blair Sweeney, Sun Power Corporation  
Mr. Tim Tutt, Sacramento Municipal Utility District  
Mr. Jeremy Weinstein, PacifiCorp (by telephone)  
Mr. Chuck White, Waste Management  
Mr. Eric White, California Air Resources Board  
Ms. Valerie Winn, Pacific Gas and Electric

There being no further business, the meeting was adjourned at 6:30 p.m.

Respectfully submitted,

HARRIET KALLEMEYN  
Secretary to the Commission